PAN ACOUSTICS

DOCUMENTATION

MANUAL P SW-112 | SP + VARIANTS (ANALOGUE, AES, D)

Shapely.
Versatile.
Functional.

Read the manual carefully before putting the device into operation.
The manual must be retained.

QUALITY
MADE IN GERMANY
SINCE 2002

All products are designed, developed and manufactured by Pan Acoustics in Germany.
Pan Acoustics reserves the right to modify products without prior notice.

www.pan-acoustics.de

General information

Manual Pan Subwoofer Series
P SW-112 | SP
P SW-112 | SP | AES
P SW-112 | SP | D

Language: English
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DANTE® is a registered trademark of Audinate Pty Ltd. and describes a digital audio network.

This document must be kept with the product or in a safe place so that it is available when needed.

If the product is resold, the document must be handed over to the new owner in printed or electronic form.

Pan Acoustics reserves the right to change / update the document without prior notice. The latest version of this document can be downloaded from the Pan Acoustics website.

Pan Acoustics GmbH
Schweigerstr. 13d | 38302 Wolfenbüttel
Tel: +49 (0) 5331 900 95 70 | Fax: +49 (0) 5331 900 95 79
E-mail: contact@pan-acoustics.de

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1. Product description

Thank you for choosing a product from Pan Acoustics. The active subwoofer P SW-112 | SP from the Pan Subwoofer series with DSP technology combines an architecturally appealing design with flexible audio connections (Line, AES/EBU, DANTE® /AES67). The loudspeakers are set up and controlled via the Pan Beam Setup software.

The Pan Subwoofer series offers a comprehensive range of loudspeakers for different applications such as traditional AV installations, theatre, immersive sound and outdoor applications. All subwoofers from the Pan Subwoofer series feature:

- appealing design
- natural and unaltered audio reproduction
- powerful audio DSP
- efficient digital amplifiers
- simple networking (Pan Net)
- flexibility through modularity
- low current consumption and low quiescent current

The active loudspeaker systems of the Pan Subwoofer series can only be configured and maintained (e.g. by firmware update) using the Pan Beam Setup configuration software. An appropriate external Pan Net interface such as Pan Con or Pan Splitter or the installation of the Dante controller from Audinate Pty Ltd. on the computer is required to connect the speakers to a PC.

Please read this manual carefully before putting the device into operation to ensure trouble-free operation and allow the product to develop its full potential.

2. Symbols and explanation

⚠ **DANGER** — This symbol indicates a hazard with a high level of risk. If this hazard is not avoided, serious injury or death may result.

⚠ **WARNING** — This symbol indicates a hazard with a medium level of risk. If this hazard is not avoided, moderate to serious injury or death may result.

⚠ **CAUTION** — This symbol indicates a hazard with a low level of risk. Failure to observe this instruction may result in minor injuries or damage to property.

⚠ **NOTICE** — This symbol provides important instructions for the proper handling of the product. Failure to observe this instruction may result in damage to the product or malfunctions.

3. General information and target group

All information in this manual is based on the product properties available at the time of writing and the safety regulations applicable at that time.

This manual describes the configuration, function and connection of the Pan Subwoofer loudspeaker system variants P SW-112 | SP to the mains power supply and audio sources. It is aimed at system technicians and persons assigned the task of installing and operating a relevant system.

Pan Acoustics reserves the right to make changes and modifications within the scope of legal regulations and product improvements without prior notice.

This manual and all additional information required for operation (see also: latest versions of the "Pan Beam Setup" and "Pan Net" manuals) must be read before use by all persons involved in putting the device into operation. The manual and all additional information required must be kept within easy reach near the device.

All necessary information and documents can be obtained from the Pan Acoustics website www.pan-acoustics.de or by e-mail to contact@pan-acoustics.de.

4. General Safety Regulations

The following safety regulations must be read completely and diligently before putting the device into operation and must then be kept in a safe place near the device. Reading the manual does not replace the knowledge and observance of all valid local safety rules and regulations. The information and technical specifications published in this document are based on data available at the time of publication. We reserve the right to make changes to the product aimed towards product improvement and adjustment to new applicable standards.

⚠️ DANGER

The device conforms to protection class 1 – protective earthing. For safety reasons, the device must only be operated on a properly installed socket with earth contact. The earth contact connection must never be disconnected. The voltage of the mains power supply must match the rated voltages indicated on the device. To prevent injuries, electric shock and fire, ensure that all persons involved in the set up, operation, dismounting or installation of the device / system have read this manual.

⚠️ WARNING

To prevent electric shock,

- the product must not be connected to the mains power supply when the enclosure is open.
- the product must only be used with intact power cords.
- the product must only be connected to a mains power supply if the mains voltage matches the voltage indicated on the device.
- the product must only be mounted and fixed when disconnected from the mains power supply.
- one must never pull on the cord, but only on the plug when unplugging the device.
- no objects must be placed on top of the power cord of the device.
- the power cords must be installed in such a way that they are protected from damage due to foot traffic, pinching and tensile stress.
- it must be ensured that all devices connected to each other via signal lines are operated with earthed sockets on a common protective earth.

To minimise the risk of fire or electric shock,

- the product must not be exposed to moisture or humidity.
  (Exception: versions with an appropriate IP protection class).
- no objects filled with liquid (e.g. bottles) must be placed on top of the device.
- ventilation slots must not be covered up with objects (e.g. textiles).
- the device must not be exposed to excessive heat, direct sunlight, fire or the like.
- no open fire sources (e.g. candles) must be placed on top of the device.

To prevent injury, this product must be taken out of operation, clearly marked and secured against accidental operation if the product

- shows signs of visible damage.
- contains loose parts.
- no longer works flawlessly.
- has been stored for a long time under unfavourable conditions (e.g. in humid rooms).
- was exposed to severe transport stress (e.g. with unsuitable packaging).

To avoid damage to the device and injury,

- this product must be kept out of the reach of children.
- the product must be installed in a stable position.
- only accessories offered and approved by Pan Acoustics for the product must be used for mobile applications and fixed installations.

To avoid injuries such as hearing damage due to excessive volume levels, persons should

- never stand directly in front of a connected loudspeaker.
- not be exposed to high volume levels over a long period of time.

⚠CAUTION

To prevent damage to the product, avoid

- generating acoustic feedback.
- playing back distorted signals of high power over a long period of time.
- generating impulse-like sounds (e.g. popping noises) which occur when a media player is switched on, connected or disconnected.
- connecting the product to the mains power supply for a long period of time without using it.
- operating the device in environments with high humidity.
- operating the device without sufficient possibility of air circulation.

⚠NOTICE

Device protection and operating safety

- The device is completely disconnected from the mains power supply by pulling the mains power plug.
- The device may only be cleaned from the outside using a dry cloth.
- The original packaging or an appropriate transport box (flight case) should be used when transporting the device. The device must be protected against vibrations.

5. Safety instructions

All products from Pan Acoustics are developed and manufactured in Germany according to the latest safety regulations. Each product is thoroughly inspected prior to shipping according to in-house quality guidelines.

The device conforms to the current CE regulations for operation in residential, business, commercial and industrial areas.

The device must be carefully inspected upon receipt for transport damage and completeness. In case of damage, the transport company and the shipper must be notified without delay.

Safety may be compromised if the product:
- shows signs of visible damage.
- no longer works correctly.
- has been stored for a long time under unfavourable conditions.
- has been transported incorrectly (e.g. unsuitable packaging).

If the product shows signs of impairments that no longer guarantee safe operation, the device must be secured and labelled accordingly. It must also be ensured that no intentional or accidental operation by third parties is possible.

6. Setup location

The loudspeaker may only be operated in dry places guaranteeing sufficient air circulation. The loudspeaker must be set up in a level position and must be protected by suitable means against live loads that could cause the loudspeaker to tip, slide or fall over.

The device may be damaged by condensation. It should therefore be appropriately acclimatised before operation.

The ambient temperature during operation of the device should not exceed 40 °C and should not fall below 0 °C.

⚠WARNING

When unpacking, it is important to pay attention to the temperature difference between the ambient temperature and the device. If the temperature difference is high, it is necessary to wait a sufficiently long time before operating the device to avoid damage due to condensation.

⚠NOTICE

If the ambient temperature is higher than 40 °C, appropriate measures must be taken to protect the device against overheating. If the loudspeaker overheats, it shuts off automatically and only turns on again after it has cooled down.

7. Scope of delivery

Depending on the loudspeaker model, the scope of delivery of the loudspeakers includes the following:

7.1. P SW-112 | SP

Description	Quantity
P SW-112	SP	1
powerCON TRUE1 power cord (country-specific)	1
Shipping information	1

7.2. P SW-112 | SP | AES

Description	Quantity
P SW-112	SP	AES	1
powerCON TRUE1 power cord (country-specific)	1
Shipping information	1

7.3. P SW-112 | SP | D

Description	Quantity
P SW-112	SP	D	1
powerCON TRUE1 power cord (country-specific)	1
Shipping information	1

⚠ NOTICE

Product-specific accessories such as protective covers, transport castors and spacer bars are not part of the scope of delivery and can be obtained from a Pan Acoustics trade partner or distributor. For safe operation of the device, only accessories from Pan Acoustics may be used.

8. Definition

Pan Subwoofer
Product series for active and passive subwoofer systems

Pan Net
Audio signals, control signals and monitoring of active Pan Acoustics loudspeakers

Pan Beam Setup software
Software for setting up active Pan Acoustics loudspeakers

RJ45 / etherCON
Plug connection for the transmission of signals

powerCON TRUE1
Power connection for devices that can be plugged and unplugged under load

analog audio
Transmission of analogue balanced audio signals

100V
Transmission of analogue audio signals over long distances via two wires

AES/EBU
Digital audio signal for the transmission of signals between different devices according to AES3

DANTE
Digital audio network protocol for the transmission of audio signals via a 1 Gigabit LAN

USB
Serial port for data connections to devices, e.g. a computer

Daisy chain cabling
Cabling type in which the devices are connected serially, i.e. in series one after the other

General Purpose Interface (GPI)
Describes a platform-independent connection between devices from different manufacturers

⚠ NOTICE

Pan Net is Pan Acoustics' control and audio distribution network. Depending on the Pan Net interface, one or more daisy chain cables or other cable types are supported. Depending on the interface, the Pan Net cabling supports two-channel analogue and digital (AES3) audio. In a Dante/AES67 network, the control data from Pan Net are tunnelled through the IP-based audio network.

9. Connections

9.1. P SW-112 | SP connector panel and variants

9.1.1. P SW-112 | SP and P SW-112 | SP | AES connector panel

No.	Description
[1]	Clip LED Display for input overload
[2]	Status LED Display for operating status
[3]	Pan Net IN / THRU Input & output for audio signals (analogue and AES3), RS 485 and alarm contact
[4]	Ext. subwoofer output Connection for passive P SW-112
[5]	powerCON TRUE1 In/Out Mains power connection

⚠ NOTICE

To avoid malfunctions, the recommended bending radius of the mains power and signal connection cables must be observed.

⚠ NOTICE

The warnings on the connector panel must be observed.

9.2.1. P SW-112 | SP | D connector panel

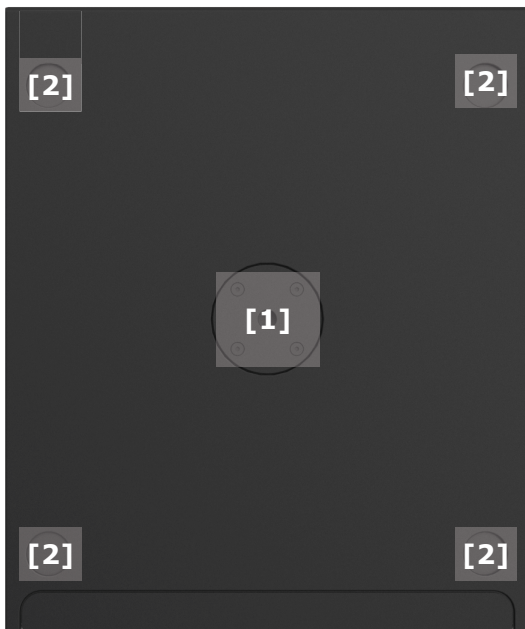| No.	Description
[1]	Clip LED Display for input overload
[2]	Status LED Display for operating status
[3]	Dante / AES67 connection Primary port Secondary port
[4]	Pan Net IN / THRU ethterCON Audio signals - output (AES3) Audio signals - input (1x analogue) RS 485 and alarm contact
[5]	Ext. subwoofer output Connection for passive P SW-112
[6]	powerCON TRUE1 In/Out Mains power connection

⚠ NOTICE

To avoid malfunctions, the recommended bending radius of the mains power and signal connection cables must be observed.

⚠ NOTICE

The warnings on the connector panel must be observed.

9.2. Mounting plate and stacking recesses

No.	Description
[1]	Mounting plate with M20 thread for spacer bar
[2]	Stacking recesses

9.3. System creation with PB 08 from the Pan Beam series

The P SW-112 | SP + variants can be combined with a PB 08 from the Pan Beam series to a loudspeaker system. The following items are needed to create such a system:

Article no.	Description
802455	Accessory, "RingLock" spacer bar (BK)
801843	Accessory, tripod mount II, P xx / PB xx, stainless steel
div.	Pan Beam PB 08 (variant)

⚠ NOTICE

Only accessories approved by Pan Acoustics may be mounted and used on the mounting plate with M20 thread in order not to endanger the stability. When a spacer bar is used to mount a top, the device's centre of gravity changes. The loudspeaker must therefore be set up in a level position and must be protected by suitable means against live loads that could cause the loudspeaker to tip, slide or fall over. The spacer bar (article no. 802455) must not be used in the extracted position. If several devices are stacked on top of each other, it must be ensured that the devices sit securely in the stacking recesses. The stacked devices must be protected by suitable means against live loads.

10. Initial operation

10.1. Mains power connection

⚠WARNING

- Only operate the device on mains power supplies with earth contact.
- Damaged mains power cables or plugs must be replaced with a faultless mains power cable or plug.
- It must be ensured that the mains power plug is always freely accessible to be able to disconnect the device from the mains power supply in case of danger or malfunction.

Before connecting the device to the mains power supply, it must be ensured that the specifications regarding voltage and frequency match the specifications on the device's connector panel. The specifications can be found near the mains power connection.
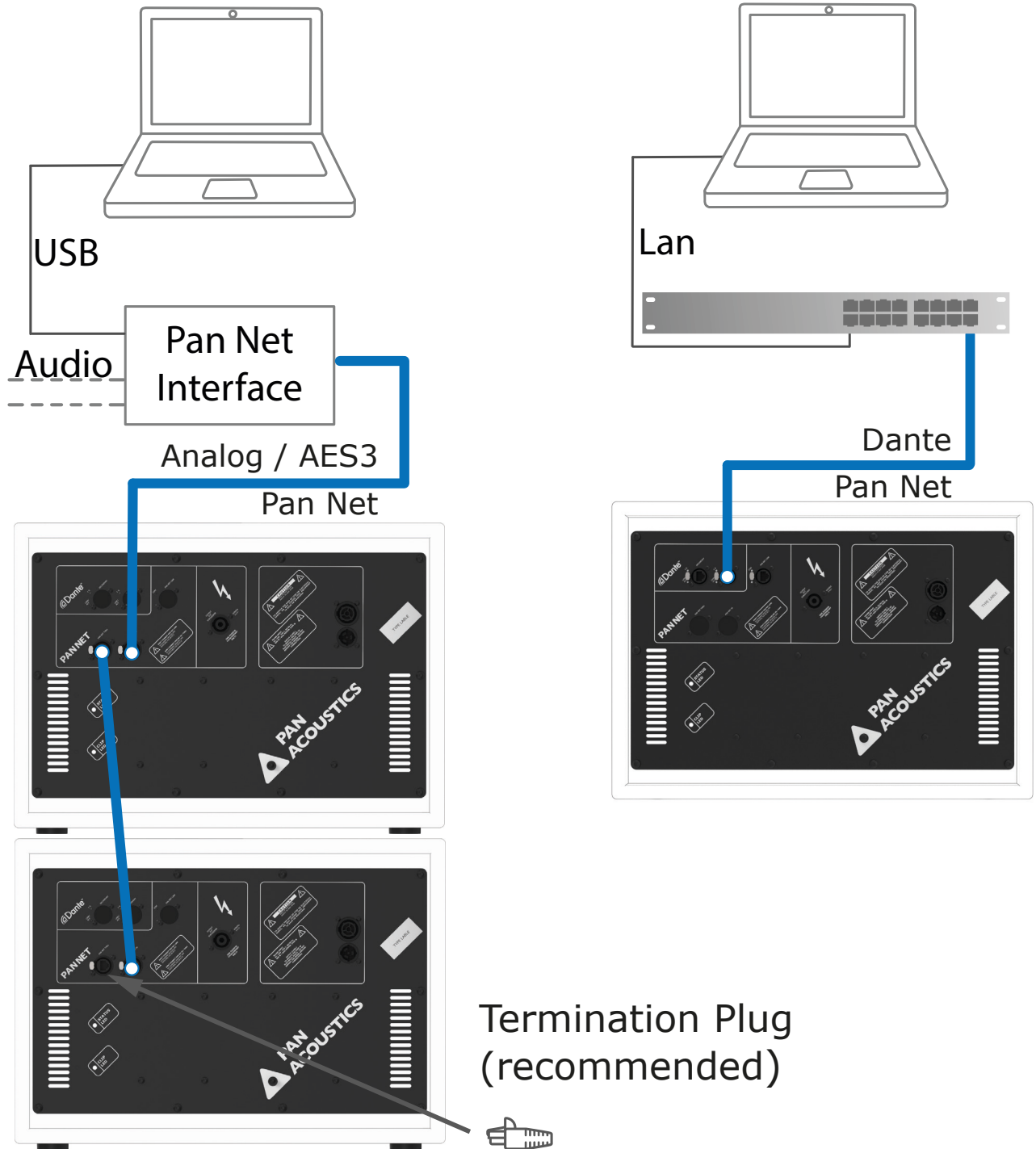

Mains voltage range:

100 to 240 VAC, +50/60 Hz, max. 2400 W.

The device is connected to the mains power supply by means of a powerCON TRUE1 plug connection. The connection on the back of the device is designed as input / output so that another device can be connected to the device via a powerCON TRUE1 connection cable.

⚠NOTICE

The number of devices per mains phase depends on the maximum possible current load of the phase. The latter must not be exceeded. If the full output power of the device is needed, it is strongly recommended to operate only one device per mains phase.

10.2. Connection – audio and control data

USB

Lan

Pan Net Interface

Audio

Analog / AES3

Pan Net

Dante

Pan Net

Termination Plug (recommended)

⚠ NOTICE

High-quality cables must be used for safe and reliable signal cabling. At least CAT5e S/STP or CAT6 F/STP network cables must be used for the Pan Net cabling. At least CAT6 network cables with appropriate shielding must also be used for the cabling of IP networks.

For secure and interference-free transmission of the signal data via Pan Net (analogue / AES3), a "termination plug" must be installed in the output of the last speaker in the series. For termination, there is a separately available RJ45 plug with terminating resistor (article no.: 804105).

10.3. Connection – additional passive subwoofer system
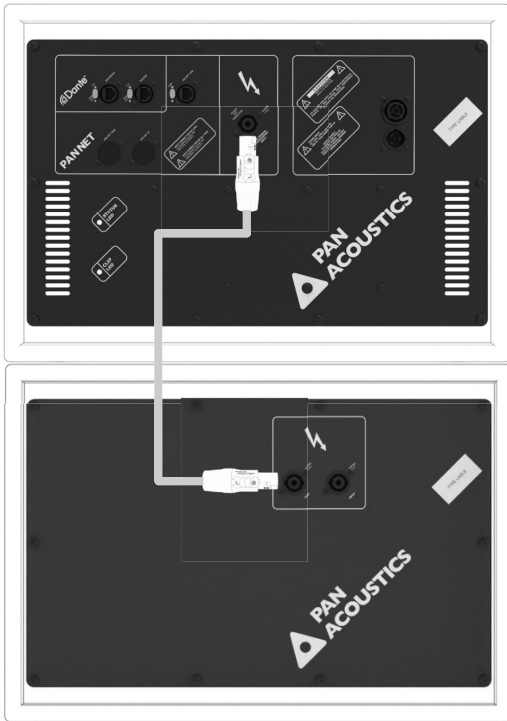
⚠ NOTICE

The active P SW-112 | SP subwoofer system can drive **one** passive P SW-112.
An NL4 loudspeaker cable must be used for the connection between the active subwoofer and the passive subwoofer.

11. Error description

Status LED	Display		Meaning
	○	Off	No power supply
	🟢	Is green	Ready for operation
	🟠	Flashes orange	Communication
	🔴	Is / flashes red	Error

Problem	Cause	Remedy
Signal LED off	Speaker has no power	Check the connection to the mains power supply
Signal LED is / flashes red	Loudspeaker has detected an error	Contact service department
Signal LED flashes orange	Communication between software and loudspeaker, communication between media controller and loudspeaker	None, as this is normal behaviour
Connected loudspeaker does not appear in the software	Pan Beam not connected to Pan Net or Dante	Check connection, verify IP address/subnet in Dante controller
	1G status LED on the loudspeaker-Dante interface off	Check the connection to the switch of the PC and the loudspeaker
	COM status LED on the loudspeaker-Dante interface does not flash	Start software correctly and select Dante interface correctly
No audio playback	No audio signal connected	Connect audio signal via audio input on the interface, crosspoint not set in Dante controller routing matrix
No audio playback despite connection	Wrong audio input chosen	Check audio connection for correct connection
No audio playback despite correct connection	No audio signal, cable defective	Check audio signal, check cable to the source
Dante Distorted audio playback	Incorrect sample rate or limited bandwidth in the network	Set the sample rate correctly, check bandwidth in the network
No connection via Pan Net Interface	USB cable not plugged in correctly	Check cable for correct connection
	Network cable and/or USB cable defective	Replace cable
	USB cable plugged into USB port after Pan Beam Setup program launch	Relaunch Pan Beam Setup program

Problem	Cause	Remedy
Media controller does not work	Pin assignment incorrect	Check pin assignment
	Baud rate incorrect	Set correct baud rate
	Faulty instruction set	Check instruction set
	Wrong multicast address	Check multicast address

⚠ NOTICE

If the error is not specified in the above table or cannot be remedied using the measures mentioned, please consult the technical support of Pan Acoustics GmbH.

For contact details, see chapter 16.

12. Service and repair

Service and repair work may only be carried out by Pan Acoustics or by persons and partners authorised and instructed by Pan Acoustics.

No service or repair work may be carried out on the device beyond the stated maintenance measures.

For contact details, *see chapter 16.*

13. Maintenance measures

The following measures must be carried out at regular intervals:

Cleaning
The enclosure should be regularly dusted off with a damp cloth and checked for damage.

Visual and functional check
The installed device should be regularly subjected to a visual check.

The following checks must be carried out:
- Check signal connections and mains power connection for correct fit and damage
- Check that the grille is firmly inserted into the enclosure
- Check the enclosure for damage
- Check ventilation slots in the connector panel; ventilation must not be impaired by foreign bodies

14. EC conformity (CE Mark)

The declaration of conformity for the relevant product from the Pan Subwoofer series can be requested from Pan Acoustics.

15. WEEE declaration (disposal)

The waste bin symbol indicates that electrical and electronic devices must not be disposed of with household waste after their useful life. This symbol can be found on the type plate of our products. Dispose of the device in accordance with the applicable regulations and any contractual agreements. If you have any questions about disposal, please contact your dealer, distributor or us.

16. Contact address

Pan Acoustics GmbH   Tel: +49 (0) 5331 900 95 70
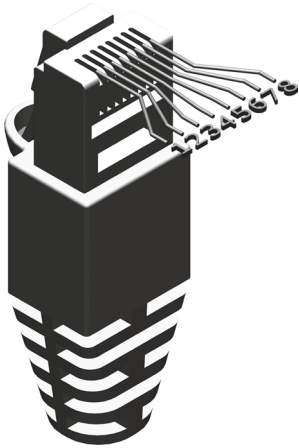Schweigerstr. 13d   Fax: +49 (0) 5331 900 95 79

38302 Wolfenbüttel   E-mail: support@pan-acoustics.de
Germany

17. Appendix

17.1. Pan Net – RJ45 pin assignment

| Pin	Description
1	Input A +
2	Input A -
3	Relay contact +
4	Input B + (AES/EBU)
5	Input B - (AES/EBU)
6	Relay contact -
7	RS485 +
8	RS485 -
Enclosure	PE (earth / ground) shielding

17.2. Alarm contact (alarm loop)

Each active pan subwoofer speaker has an alarm contact. The loudspeaker can indicate a detected fault via this alarm contact. A switching relay is built into the speaker for this purpose, which is closed in normal operating mode. If the loudspeaker is without a supply voltage or an internal error is signalled via the DSP, the relay is opened.

In the Pan Net with analogue / AES/EBU audio signals, all devices on a Pan Net line are connected to each other using daisy-chain cabling. A bridge must be created between pins 3 and 6 (see chapter 17.1. *"Pan Net - RJ45 pin assignment"*) on the device at the end of the cabling in order to close the loop for the alarm contact. The RJ45 plug with terminating resistor (article no.: 804105) can be used for this purpose.

Via the Pan Con and Pan Splitter interfaces, the alarm loop can be evaluated via all connected devices of a Pan Net line, e.g. via a GPI on the media controller. For this purpose, the 3-pin connector on the Pan Net interface must be connected to the device accordingly.

Example: Pan Con 485

[1] Alarm loop --> etherCON pin 3
[2] Alarm loop --> etherCON pin 6

Pan Net jumper plug
804105
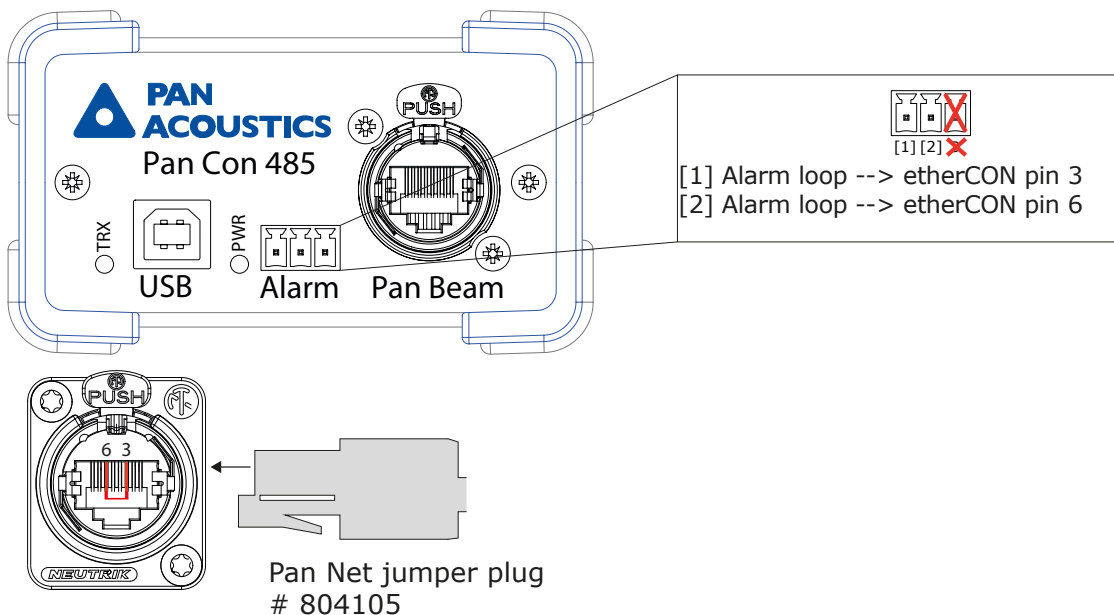
⚠ NOTICE

Pan Net via Dante / AES67
If the Pan Net is tunneled via Dante / AES67 networks, it is also possible to evaluate the alarm contact at the loudspeaker with Dante interface. This is done via the Pan Net Link connection. *For the assignment, see chapter 17.1.*

17.3. Control via media controller

17.3.1. Pan Net

Via the Pan Net interfaces, Pan Splitter 4/4 and Pan Splitter 2/6, the presets stored in the loudspeakers can be activated using a media controller. To do so, connect the media controller to the specified interfaces via the RS485 interface.

The following control commands must be transmitted completely to activate the presets stored in the loudspeakers. The indicated timing must be taken into account. There is no feedback about the execution of the command to the controller. All active Pan Acoustics loudspeakers with Pan Net support that are in the same Pan Net area execute the command.

Timing
A waiting time of at least 3 s must be adhered to between the individual commands.

⚠ NOTICE

Mixed operation on the RS485 bus with other devices of third-party manufacturers is not permitted due to the different protocols!

This may lead to a malfunction and/or failure of the connected loudspeakers. Reactivation is only possible via technical support.

Parallel operation of a media controller and the Pan Beam Setup program is not possible and must be avoided.

Control commands

Calling up presets	String (HEX)
Preset 1	0x02 0x46 0x46 0x46 0x45 0x52 0x1C 0x30 0x31 0x1C 0x30 0x32 0x30 0x32 0x0D
Preset 2	0x02 0x46 0x46 0x46 0x45 0x52 0x1C 0x30 0x32 0x1C 0x30 0x32 0x30 0x33 0x0D
Preset 3	0x02 0x46 0x46 0x46 0x45 0x52 0x1C 0x30 0x33 0x1C 0x30 0x32 0x30 0x34 0x0D
Preset 4	0x02 0x46 0x46 0x46 0x45 0x52 0x1C 0x30 0x34 0x1C 0x30 0x32 0x30 0x35 0x0D
Preset 5	0x02 0x46 0x46 0x46 0x45 0x52 0x1C 0x30 0x35 0x1C 0x30 0x32 0x30 0x36 0x0D

⚠ NOTICE

The prefix 0x in the string (HEX) must be adapted or can be omitted depending on the media controller used. Please refer to the manual of the media controller used for the relevant information.

17.3.2. Crestron

A corresponding module is available for operation with a Crestron media controller. The module can be obtained from the Crestron website or from Pan Acoustics.
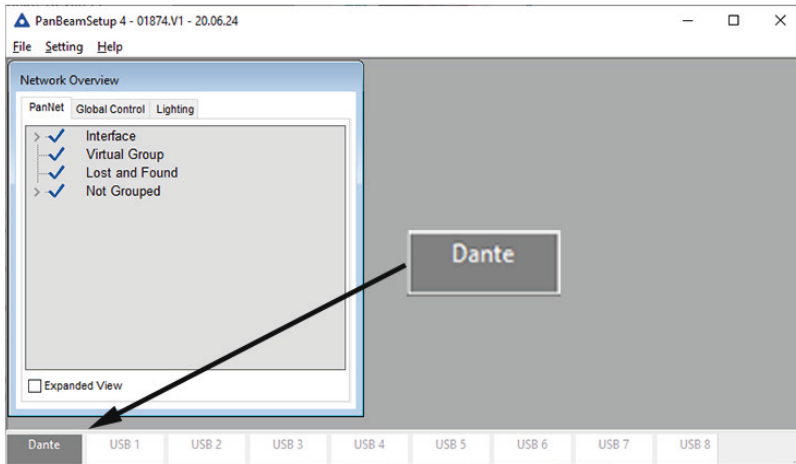
17.3.3. Pan Net / Crestron interface configuration

RS485 interface configuration

| Baud rate	38,400 ± 3%
Data bits	8
Parity	none
Stop bits	2
Flow control	none

17.4. Dante

17.4.1. Setup

The loudspeakers in the Pan Beam series are to be set up through the Pan Beam Setup software. The Dante Controller software from Audinate must be installed to access a Dante network via the software. After successful installation, the Dante interface (Ethernet) appears in the footer of the Pan Beam Setup software.

The latest version of the Dante Controller software must be installed accordingly. Link for download: https://www.getdante.com

17.4.2. Routing
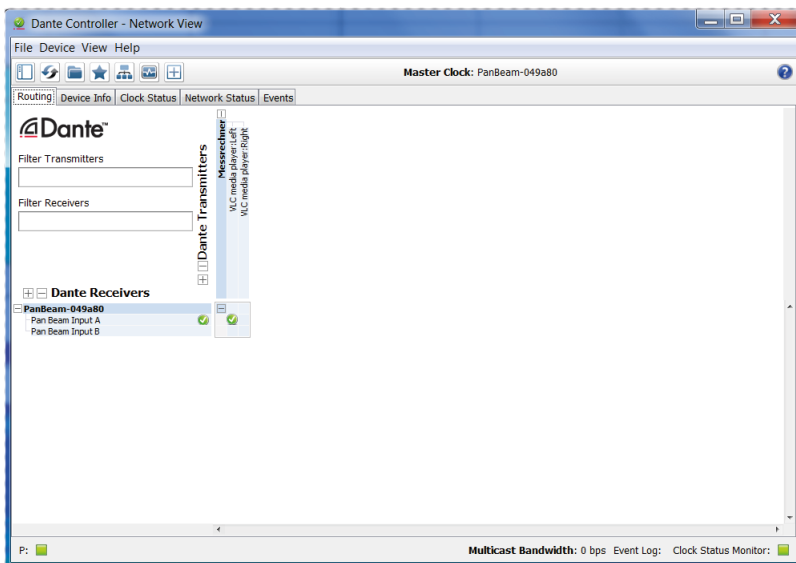
A Pan Acoustics loudspeaker appears in the Dante network under the "Dante Receivers" tab. The loudspeaker has two inputs, Input A and Input B.

For audio routing, the relevant connection must be set between the desired Dante transmitter and the Pan Beam loudspeaker.

⚠ NOTICE

The relevant audio source (Input A and/or Input B) must also be activated in the loudspeaker via the Pan Beam Setup software.

17.4.3. Device configuration
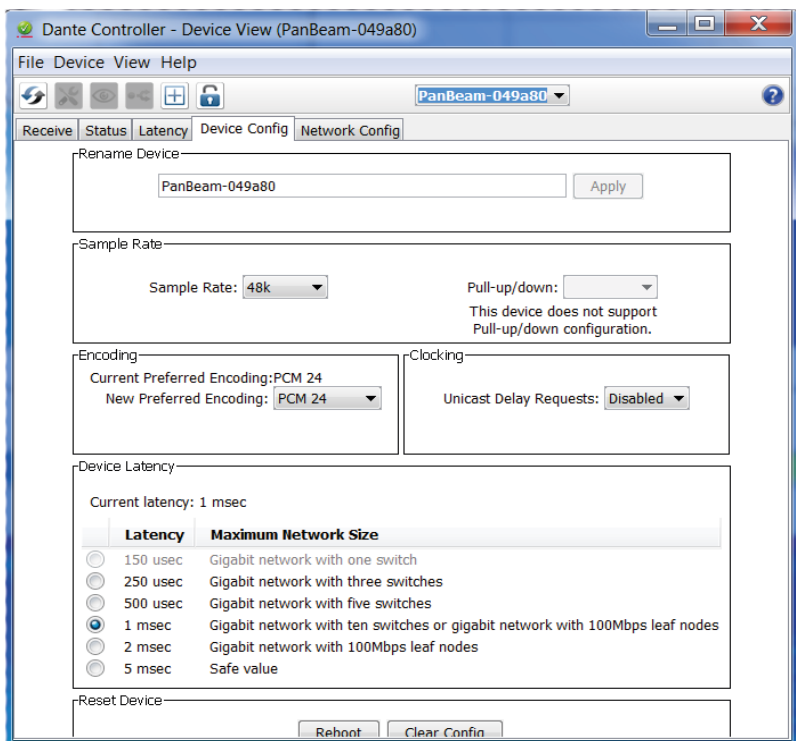
Various settings in the Dante interface of the loudspeakers can be made via the "Device Config" tab.

Rename device:
Assign a name for the speaker
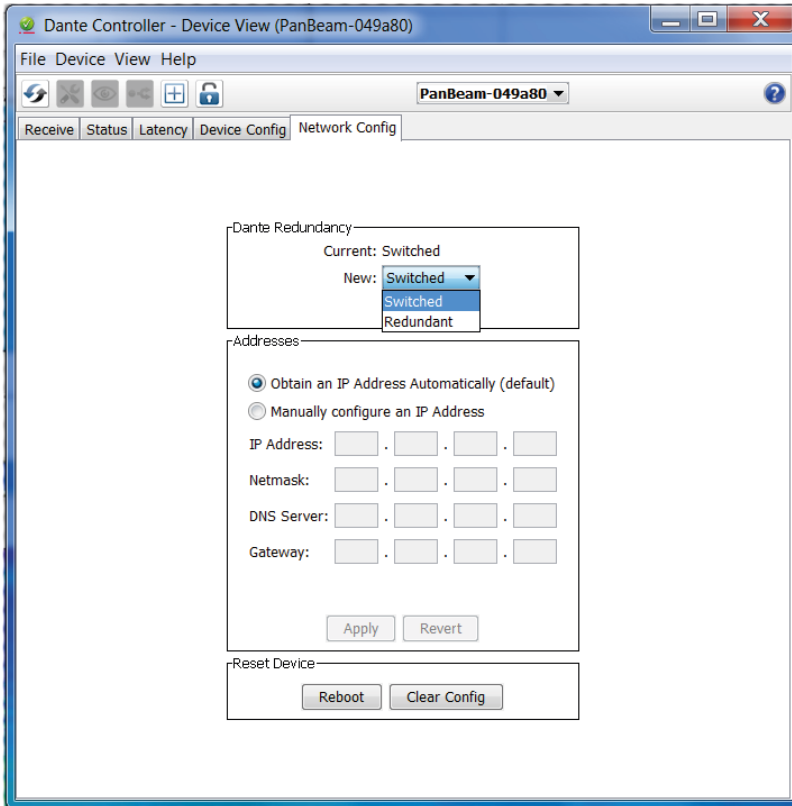
Sample rate:
44.1 kHz, 48 kHz, 96 kHz

Encoding:
Pan Beam loudspeakers support PCM24 and PCM32 encoding
Device latency and clocking
See Audinate Dante information at https ://www.getdante.com

17.4.4. Network configuration

The Dante interface of the loudspeakers supports the "switched" and "redundant" modes in the Dante network.

Switched:
If the Dante interface is set to "switched", an additional Dante device, e.g. a stage box, can be connected to the secondary port and operated in the Dante network. Connecting another Dante-capable device to the secondary port in the "switched" mode is technically possible, but not recommended.

Redundant:
If the Dante interface is set to "redundant", the Pan Beam loudspeaker can be connected to the redundant Dante network with a second network cable.

17.4.5. Status
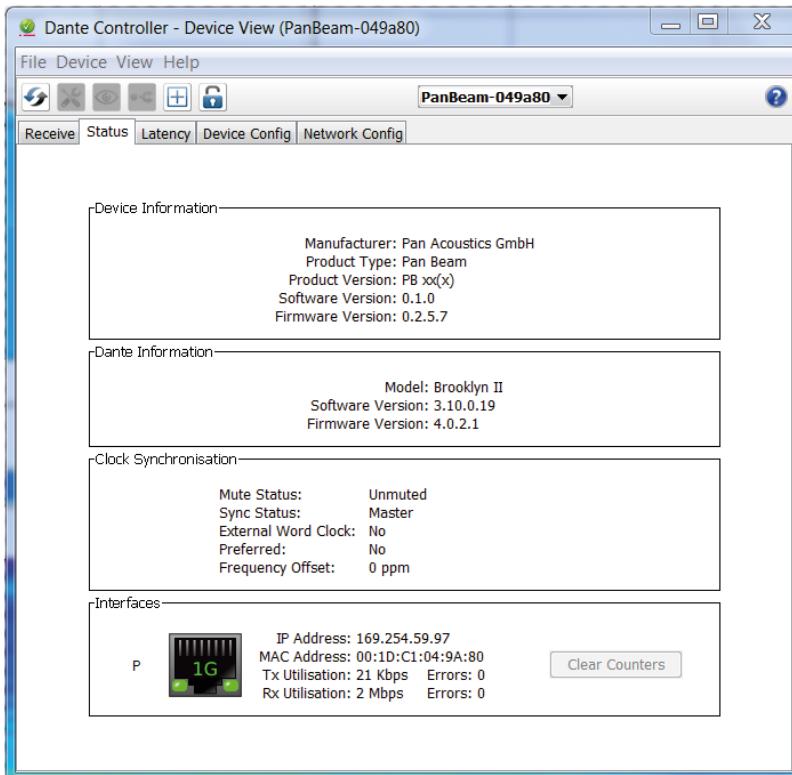
Via the "Status" tab, information on the device, firmware and software version, clock status and network interface can be called up.

17.4.6. Pan Net (AES/EBU) to Dante interface

[1] Pan Net Link

Via the Pan Net Link etherCON port on the loudspeaker, additional Pan Acoustics loudspeakers with AES/EBU interface can be connected in daisy chain.

Attention must be paid to the correct sequence (input / output).

⚠ NOTICE

When connecting loudspeakers with AES/EBU interface from the Pan Beam or Pan Subwoofer series, attention must be paid to the correct connection sequence (input / output). If both audio channels A/B are needed on the connected AES/EBU loudspeakers, the corresponding cross point must be set in the Dante controller.

### 17.4.7. Dante LED status indicator

Above the etherCON ports for the Dante or AES67 network, there are two LEDs for status indication:

The [LINK/ACT] LED is green if everything is connected correctly.

The [1 G] LED is orange if a 1 Gigabit network has been detected.

The [COM] LED flashes "red" when communication is taking place via the PanNet bus.

17.4.8. Alarm contact (alarm loop) in connection with Dante
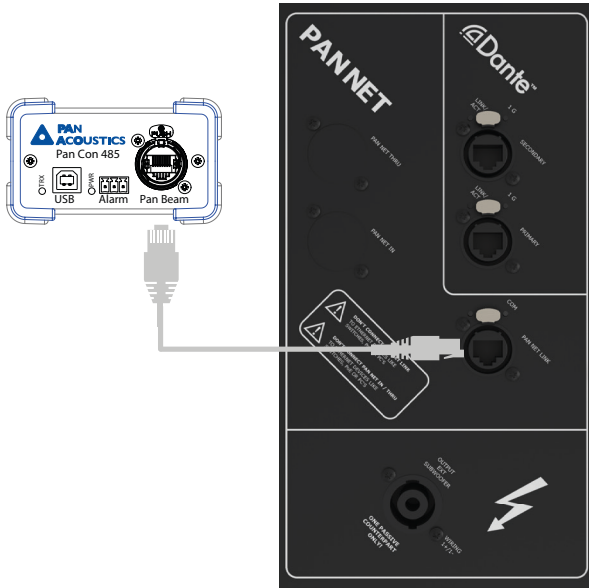
Each Pan Beam loudspeaker has an alarm contact. The loudspeaker can indicate a detected fault via this alarm contact. A switching relay is installed in the speaker for this purpose, which is closed in normal operating mode. If the loudspeaker has no supply voltage or if the DSP reports an error, the relay is opened.

Pan Beam loudspeakers connected to a Dante network also have this function. This function can be used via the Pan Net Link interface. For this purpose, the loudspeaker must be connected to an appropriate interface, e.g. Pan Con, via the Pan Net Link interface by means of a network cable. Via the alarm contact on the Pan Con interface, the alarm contact status can then be monitored by means of a GPI on the media controller.

17.4.9. Dante media controller

Via the Dante audio network of the manufacturer Audinate Pty Ltd. it is possible to activate the presets via UDP commands.

General information
The following control commands must be transmitted completely. The timing indicated below must be taken into account. There is no feedback. All Pan Beam loudspeakers in the audio network execute the command.

Timing
A waiting time of at least 3 s must be adhered to between the individual commands.

Network address and port
Multicast address see chapter 17.4.10 Multicast address for control data
UDP-Port: 4712

Calling up presets	String (HEX)
Preset 1	50 41 4e 41 43 4f 55 53 54 49 43 53 02 46 46 46 45 52 1c 30 31 1c 30 32 30 32 0d
Preset 2	50 41 4e 41 43 4f 55 53 54 49 43 53 02 46 46 45 52 1c 30 32 1c 30 32 30 33 0d
Preset 3	50 41 4e 41 43 4f 55 53 54 49 43 53 02 46 46 45 52 1c 30 33 1c 30 32 30 34 0d
Preset 4	50 41 4e 41 43 4f 55 53 54 49 43 53 02 46 46 45 52 1c 30 34 1c 30 32 30 35 0d
Preset 5	50 41 4e 41 43 4f 55 53 54 49 43 53 02 46 46 45 52 1c 30 35 1c 30 32 30 36 0d

17.4.10. Multicast address for control data

From Dante firmware version 18.64.1.0, the UDP packets required for control are sent via the multicast address: 239.0.1.4. Multicast data traffic via the address must not be blocked in the system. In earlier firmware versions, the multicast address: 224.0.1.4 is used.

The corresponding network configuration required for the AoIP network used must be carried out in accordance with its specifications. For a Dante® network, the relevant information can be obtained from the website: www.getdante.com.

Mixed operation of different firmware versions is not permitted.
A firmware update can be installed via the „Dante Controller" software.

18. Technical data

For technical data of the products mentioned in this manual, see the latest data sheets of the products. These are available on the Pan Acoustics website under "Downloads".

19. Firmware updates

Firmware updates are used to maintain the software installed on the device. There are two hardware modules for the active loudspeakers with Dante interface: Dante interface and Pan Audio DSP.

Pan Acoustics has no influence on the firmware of the manufacturer Audinate for the Dante audio network. The software for these interfaces must be updated at certain intervals to ensure compatibility with other products equipped with the Dante interface; see chapter 19.1. Dante interface.

The Pan Audio DSP rarely needs a firmware update. See chapter 19.2. Pan Audio DSP.

19.1. Dante interface

It may be necessary to update the firmware of the Dante interface. The required firmware versions are available via the Dante Controller software. This software can be used to update the firmware of the interface via the network.

19.2. Pan Audio DSP

A firmware update of the Pan Audio DSP must only be carried out upon request of the Pan Beam Setup software or by the technical support of Pan Acoustics. The firmware is updated via the Pan Beam Setup software and the Pan Con interface. To do so, the interface must be connected to the Pan Net Link port.

Contact:
Pan Acoustics GmbH | Schweigerstr. 13d | D-38302 Wolfenbüttel | Germany
Tel: +49 (0) 5331 900 95 70 | Fax: +49 (0) 5331 900 95 79 | Mail: Contact@pan-acoustics.de

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